

*Heodes virgaureae balcanicola* Graves is also probably at its southern limit in Greece on Mt. Tymphristos. We found it very commonly in the forest, feeding especially on the flowers of Danewort. The form seems to be identical with that found further north in the Balkans.

*Zygaenidae*. We took such Burnets as came our way, without special search. I am indebted to Mr. W. G. Tremewan for identification of the following species and sub-species: *Zygaena purpuralis hellena* Burgeff, Tymphristos, 1,700m., three 17.7; *Z. carniolica eurythaenia* Holik, Tymphristos Forest, 1,100m., many 16.7; *Z. ramburi helmosica* Reiss, Cherkobus Plateau, 1,600m., three 11.7.44 (presumably the sub-specific type locality); *Z. ephialtes tymphrestica* Holik, below Megaspeleion, c. 500m., 9.7, a variable group on flowers on the wayside: in one specimen the usually red basal spots and abdominal band are bright yellow, while in others the outer white spots on the forewings are filled in to varying degrees with red. Scattered specimens also elsewhere, including the Tymphristos Forest.

### Scotland 1974

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Hearing at the beginning of May that the season in Central Scotland was well in advance of normal (which was not surprising considering the mild winter), and that *Eurois occulta* L. larvae were available, my friends Messrs. Meredith, Skinner and Rogers and I assembled near Bristol on the morning of 7th May, and piling into one car, drove the length of the country using the western motorways.

We arrived in the Trinafour region of Perthshire at 4 p.m. that day, and were soon searching the roadside posts for the whitish form of *Cleora cinctaria bowesi* Richardson, finding six fresh specimens. Also present was a number of *Acronycta menyanthidis scotica* Tutt, among which was a female which laid a large batch of ova from which some of us reared the resulting larvae.

This area was our intended scene of operations for that night when we hoped to find *occulta* larvae, but noted with some misgivings the condition of the bog myrtle which apart from very dried up catkins, looked devoid of life, with hardly a leaf-bud to be seen.

After arranging accommodation at our usual hospitable farm, we put out six m.v. traps across the surrounding rough fields and then drove back to the Tummel area, where on our way up we had noticed things appeared more forward and with the birches in leaf, but found that the bog myrtle was in the same bare state as at Trinafour. At dusk we searched the leafy seedling birches for larvae of *Polia hepatica* Clerk, finding only a few fully-fed examples of this and a few other larvae coming up to feed as it grew dark. Some *Trichopteryx carpinata* Borkh. came on the wing but were worn. Surprisingly, *Petrophora cholersata* Scop. was well out among the bracken beds, though

not yet seen this season by any of us in the south. A swallow well in blossom had a fair number of moths in attendance, including *Cerastis rubricosa* D. & S., *Orthosia gothica* L., *O. incerta* Hufn. and *O. gracilis* D. & S.; some of the latter both here and later in the traps being attractively flushed with pink, and among them females which laid ova from which we ultimately obtained numerous pupae.

We drove back to Trinafour in leisurely fashion as we understood that *occulta* larvae only come up to rest on the bog myrtle late at night. On arrival however, we found that two friends who had preceded us by a few days were already searching the plants and had found a few larvae. Joining in the quest we found *occulta* very few and far between, and looking very similar I noticed, at this one-third grown stage, to young larvae of *Eugraphe subrosea* Steph. and sharing with that species the awkward habit of dropping if one's approach was not deft enough to secure them immediately.

Our friends departed around midnight, having obtained enough larvae on this and previous nights to satisfy their requirements, and I watched their going with some envy as we continued searching the plants with our lamps on into the night. At 2 a.m. we found ourselves not only tired, but with few larvae to show for our efforts, and one member of our party having had the misfortune to find nothing so far. The situation changed dramatically over the next hour however, and we began finding larvae commonly, some nearly half grown, which was surprising considering the apparent lack of nourishment and their reluctance to feed even when up on the foodplant, as all we found were just sitting quietly on the bare twigs. We noted later that our captive larvae preferred the catkins to the few leaf-buds of the plant we were able to find, and even ate these dry-looking morsels when tender young birch leaves were offered, though the latter and other alternatives were consumed readily once our supply of catkins was exhausted. Our larvae also fed freely in the daytime and another surprising thing was just how closely some *Noctua comes* Hübn. larvae (gathered at the same time for the varieties which occur in this area) resembled some paler *occulta* larvae. Indeed, one of two were still doubtful until they went down for pupation weeks later, the smaller *comes* then going down leaving pale *occulta* to feed on to the truly grand proportions these interesting larvae eventually reach. We packed up at 3 a.m. having seen by then well over a hundred larvae, and these mostly in the last hour.

Despite retiring at 4 a.m. we were up at 7.30 to inspect the intake at our traps, finding a fair sprinkling of *Cerura vinula* L., *Polia bombycina* Hufn., *Xylota vetusta* Hübn., *O. gothica* and *O. gracilis*, with single specimens of *Odontesia carmelita* Esp. and *Acronycta euphorbiae myricae* Guen.

After breakfast we drove north to Aviemore, stopping at a roadside quarry on the way to collect a few *Entephria flavicinctata* Hübn. larvae which one of our party required, noting as we quickly shook the necessary number

from the saxifrages, that they were as small as one would expect at this early date.

On arrival in the Aviemore area we spent some time searching posts for *myricae* but only discovered one for our trouble. As usual a number of larvae of *Lasiocampa quercus callunae* Palmer were on the posts, mostly about one-third grown, and unusually, a fine male *Endromis versicolor* L., which must have been a rather late example, as there were newly hatched larvae of this species on the young birches nearby.

We also visited the bilberry areas that afternoon, but with hardly a leaf to be seen, only carried out a brief token beating through the *Semiothisa brunneata* Thunb. colony, and obtaining one half grown *Syngrapha interrogationis* L. We hoped for better luck here in June when we intended to return.

After dining at the Aviemore Centre we split up into two pairs at dusk, one couple working the broom bushes on Granish Moor for *Chesias rufata scotica* Richardson, the other two searching elsewhere for *Paradiarsia sobrina* Dup. larvae. Heavy rain clouds were now assembling, and an accompanying strong cold wind nullified the search for the latter, virtually no larvae of any kind being brave enough to come up to feed. We learned at 11 p.m. on reassembling that despite appalling conditions the few *rufata* required had been taken. We were by now grateful to seek the shelter of our car, and leaving Aviemore returned to Trinafour, calling at the *occulta* area of the previous night as we passed and finding there a good number of larvae in the half hour between 12.30 and 1 a.m. that we stayed, the night being much milder in that locality.

Our inspection of the traps early next morning produced nothing new from the first night's intake, and we packed them up before breakfasting preparatory to the long journey south, and arrived ten hours later at our respective homes after a very busy 64 hours absence.

The morning of 9th June found Pat Meredith and myself journeying north and once again heading for Scotland on a six-day collecting trip. Our companions of the May visit, Messrs. Rogers and Skinner, had preceded us on this occasion by several days, and although forewarned that the weather was bad, we were unprepared for the coldness of the wind and threatening sky on arrival at Aviemore late that afternoon, the place looking just as grim as when we last saw it a month before!

After settling into a bungalow on the edge of the reserve we contacted the advance party who were staying in another part of Aviemore, and commiserated with them over dinner on the unseasonable weather. Afterwards they helped us add our two traps to theirs located around the edge of the reserve, noting as we did so that a fresh snowfall was showing lower down the slopes of the Cairngorms than I had even seen it much earlier in the spring of other years. It was no surprise to learn that so far our friends had only seen one specimen of *Hyppa rectilinea* Esp., one of the very few moths which had



responded to their lights during their stay, and the coming night looked far from hopeful.

At dusk I sugared the up-wind side of the reserve, approaching the task with more enthusiasm than the others, who were tired of putting sugar out night after night for nothing, and I ran out about 400 yards on a convenient deer-fence. With cold rain showers starting as darkness closed in, the other two sensibly retired to their lodgings for a night's rest, leaving me the sugaring round as my companion Pat, had already gone off to search for the *sobrina* larvae he still required.

I was delighted to find two *rectilinea* in attendance on the pitches at my first inspection, a new species for me, though the others had all obtained some specimens in previous years. A few *Blepharita adusta* Esp. and *Hada nana* Hufn. were the only other visitors. Two more rounds produced nothing new and with the rain getting heavy enough to wash my sugar patches away, I sought my companion, who had managed to find one *sobrina* larva and we agreed to call it a night.

Meeting up with the others after breakfast the following morning, we decided to take advantage of rain-free conditions to visit the bilberry areas, where, over the past few days our friends had beaten and swept several *brunneata* larvae, but finding that the vegetation was still very wet we spent several messy hours in obtaining only a few larvae each for our trouble. Perhaps a word here on identification of this larva from numerous others on bilberry may not come amiss, as illustrations of this species are few and far between and not very accurate we have found. Without going into lengthy descriptions of colour and shape we found the simplest method was to observe the attitude of the newly captured larva on beating tray or sweep net. The larva of *brunneata* lies as if dead for a short period in a very characteristic tight horse-shoe shape, in which front and rear halves are touching, belly to belly. *Hydriomena furcata* Thunb. larvae when younger bear a superficial resemblance to those of *brunneata* but are less colourful; moreover, *furcata* tends to twist sideways with head tucked into its side, a characteristic that readily separates it from the larva of *brunneata*. One other aspect of the life of this local species which may be of interest is just where the majority of these larvae manage to hide themselves. Two members of our party have seen this moth flying abundantly in previous seasons over the areas we were beating, yet all our work on this and other occasions during our stay produced less than two dozen larvae, which may not sound many but is in our experience an unusually high number compared with our efforts of previous years. We have tried different dates, weather conditions and times of day and night without noticeable improvement, several times drawing a complete blank when larvae must have been present in considerable numbers. Among other larvae that we beat here were a few *interrogationis* and *Trichiura crataegi* L. and those of *Eulithis populata* L. and the previously mentioned *furcata* were common as usual.

By mid-day it was raining once more, so we called into one of our cars and headed for Rannoch, where an attempt some years ago to locate *Conopia scoliaeformis* Borkh. in the vast birch woods of that area had failed miserably. But armed this time with more precise information, we located a colony without any trouble, finding a few pupae, several larvae and some vacated cocoons of this season as well as some with parasitic cocoons. We regretfully abandoned our search at 8 p.m. having spent a pleasant afternoon in the sun for a change. Passing through the Dalwhinnie area on our return to Aviemore we were treated to a grand display of Red Deer feeding in small herds spread several miles along our road, and we must have seen between one and two hundred of this our largest animal, looking splendid in the late evening sun.

Back at Aviemore the weather had not improved, and as we dined at the Centre overlooking the reserve we watched a similar night build up to the previous one, while one member of our party reminisced about a certain collector who in the past had sugared the line of posts bordering that side of the reserve we were looking at finding some 90 *rectilinea* on his patches! We were suitably impressed by these recollections of a bygone era, and though conditions looked grim we noticed a slight rise in temperature as we left the Centre, where we split up into two pairs with the others going to Craigellachie to sugar, while Pat Meredith and I tried the reserve once more, where we resolved to put out as large a sugaring round as possible. While my companion sugared posts at one end of the reserve, I renewed my patches of the previous night in the opposite direction until a new deer-fence bisecting this large birch wood was reached. I sugared down this through the middle of the wood until I emerged on the Aviemore side, but finding the legendary fence posts now new and freshly impregnated with wood preservative, I ignored these and instead sugared the birch trees along the wood's edge until I met up with P.M.'s patches, the effect being that one half of this large wood was surrounded with our bait. As it was now dusk, a look at my friend's patches produced three *rectilinea* immediately which was a hopeful start, and finding him already *sobrina* hunting I began inspecting my sugar where over the next hour or so I enjoyed good sport seeing an estimated 80 specimens of our quarry, as many as four being in attendance on some posts and I was able to select a fine series for myself and my companion in the one circuit, this really proving a "Saxon" night, as only the handful of other common species present showed. It was by now almost dawn, and with no time to inspect the patches a second time I sought out my friend who had taken a few more *sobrina* larvae despite the late date, and we retired to our beds once more in daylight, well satisfied with the night's work.

Comparing notes with the others later that morning, we found they had seen ten *rectilinea* on a much shorter sugaring round than ours. It was interesting to find that our four m.v.

traps had failed to take any *rectilinea* and very few other moths, and we helped our friends pack up their traps as they intended returning home at mid-day, and later packed up our own since we no longer needed *rectilinea*. The rest of the morning was spent bilberry beating, and a few more *brunneata* were added to the score despite heavy drizzle making conditions unpleasant. In the afternoon we visited Kincaig Wood, site of previous triumphs, but found that the council had made serious inroads into the open front part where we used to camp in our mad youth. However, all had not been entirely detrimental to the local wildlife, as a recently bull-dozed hillside had left a small sand face which now housed a thriving colony of some dozen Sand Martin's nesting holes.

With the weather brightening up for the first time since our arrival, we now visited Granish Moor, where we patrolled the *Perizoma blandiata* D. & S. colony sites for several hours but only took one example and the only specimen of this we were to see. After dinner that evening, we visited the field around Kingussie where there are colonies of *Odezia atrata* L., and swept numerous larvae of this species from the flowers of Earth-nut. Selecting only the larger nearly full-fed examples, we gathered sufficient flowers to feed them on and dug up a few plants in case fresher food was required, sampling a nut-like root as we did so just to confirm that it does make good eating as we had heard. I have to report that after the first "nutty crunch" my bulb tasted peppery, but my companion enjoyed his so much that I feared for the safety of the other plants, but need not have worried as the larvae fed up and pupated within a few days without requiring the fresh supply, though something it seemed went wrong in the rearing as for some unknown reason they all emerged dwarfed.

An attempt to beat *brunneata* larvae that night produced three full-fed examples and numerous mosquito bites, one of these larvae spinning up the next morning. Retiring fairly early and in darkness for a change, we rose early the following morning to pack our possessions aboard the car, and after breakfast we headed west for the coast and the Isle of Mull, which was a new collecting ground for both of us. Our intention was to try for *Zygaena loti scotica* Rowland Brown, and knowing the species had been seen in fresh condition at the end of June in previous years, hoped we were not too early for it at this date (12th).

I was pleased to obtain a good view of four Drake Eiders as we drove along the shore of Loch Eil, which allowed a fairly close approach on foot before they scurried off moorhen-like out on to the Loch to a safer distance. Not so pleasing was the rain which began falling as we approached the ferry, and we hoped the bad weather had not retarded things on Mull. Reaching the ferry at Lochaline at mid-day we crossed and found it drizzling on the island, and with such gloomy prospects before us set off at a steady pace along the narrow lanes with their posted passing places, but our pace quickened as the rain stopped and as it became apparent the sun might break through



we were soon hurtling by timid tourists at the passing places as if we had driven on Mull all our lives!

By 2.30 p.m. we had reached the area near Loch Scridain where the most southerly of the two *loti* colonies we knew occurred, but failing to locate the exact spot we not suprisingly found no sign of our quarry. It was by now almost sunny, and fresh *Boloria euphrosyne* L. and *Euphydryas aurinea* Rott. came on the wing along the shore. I was soon digressing from our task, searching among the numerous bi-valves strewn all over the beach for interesting specimens, but was hastily dragged away to drive to another *loti* colony on the shore of Loch Tuath where I was able to accurately pin-point the site. There we instantly found freshly emerged specimens sitting singly or *in cop.* on the few projections such as plantain seed heads and dwarfed bracken fronds on this otherwise lawn-like sward, and were speedily able to box enough for our needs, after which with the sun out at last we spent some minutes watching *loti* on the wing. We now agreed to push our luck further by visiting Calgary Bay which we knew held a colony of *Zygaena purpuralis caledonensis* Reiss, though our only information as to its precise whereabouts was that it occurred on a high steep bank above the bay. On arrival we found the whole bay on both sides for several miles fitted this description, and with no time for a prolonged search we drove aimlessly around the bay until the sand-dunes at the end came into view which looked vaguely like the species' habitat on the Burren in Ireland. Having inspected these without much hope of success as they hardly fitted the description, a grassy slope nearby caught my eye, and as I climbed the fence at the bottom I was pleased to see specimens of *caledonensis* at rest on dead grass stems around me. As we began boxing these we found all around the fence area that the specimens were deformed in various ways, but that at higher levels they were fresh and perfect and with as many as five individuals clinging together on some stems, we once again quickly obtained what we required. With the afternoon now drawing on we made a dash for the ferry and mainland, but our hopes of reaching Trinafour by nightfall were abortive. We only managed to reach Fort William by 10.30, so stayed the night at an isolated bungalow just out of town where we were not only made welcome at 11 p.m. with a freshly made pot of tea but found our room provided us with a magnificent and un-interrupted view of Ben Nevis from the window, where by chance the first clear night of our holiday gave us a perfect view of the whole mountain in clear detail even though nearly midnight, and its snow-capped summit appearing to almost overhang us. A truly splendid ending to a lucky day!

We returned next morning to Trinafour in sunshine and after arranging a bed for the night at our usual farmhouse, we made for the nearby *occulta* area of our first visit, finding as hoped that *Rheumaptera hastata nigrescens* Cockerell was on the wing, and we spent several hours over the middle of the

day patrolling the now leafy bog myrtle beds netting seven specimens and seeing a few others. We kept one female alive and from ova that she laid obtained a number of pupae. We also flushed three *Diacrisia sannio* L. at this locality, including a single female which later oviposited. I was especially pleased to take my first specimen of *Aricia artaxerxes artaxerxes* F. when netting an unidentified grey insect which was being pursued by a *Coenonympha pamphilus* L. and obviously an early forerunner of the brood, as this and other suitable areas near-by failed to produce more.

Dragging ourselves away from this productive spot, we now visited the nearby *Coenocalpe lapidata* Hübn. colony where we swept all types of vegetation in the hope of discovering this elusive larva but met with no success, though among miscellaneous larvae we did notice a few *Lycia lapponaria* Boisd. obtained from bog myrtle. Although now mid-afternoon, we again drove to Rannoch for a last try for more *scoliaeformis* pupae, but despite our developing a better technique in locating these hidden workings over the ensuing four hours, little was added to our original number, as over a dozen were found to have recently emerged and as usual parasites had taken their toll as well; also, among the larvae found were some probably destined for next season's emergence.

Back at Trinafour that evening after dinner we caught up on some setting, until midnight when we deemed the time right for another try for *lapidata*, but once again we spent a cold and unprofitable hour sweeping and searching by torch-light, seeing much the same species as at our earlier attempt and we were forced to admit our first failure of the holiday, consoling ourselves with the thought that as far as we are aware no one else has located these larvae in the wild either!

We packed up and left Trinafour next morning, passing reluctantly through the bog myrtle areas in sunshine on our way south, but as we intended trying for one more species further down in Scotland, we were unable to spend time looking to see if more *nigrescens* and *artaxerxes* had emerged.

Our final quarry was the larva of *Epione paralellaria* D. & S., and reaching the locality by early afternoon, managed to sweep 13 small larvae of this species from dwarf willow from which we later reared the moths. Thus ended a very successful holiday and we finally left Scotland and headed homewards. Two *scoliaeformis* emerged on our journey back, and it was nice to find *occulta* just starting to emerge from our pupae on arriving home.

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LARVAE OF *PIERIS BRASSICAE* L. AT CHRISTMAS. — Referring to the extraordinary winter, while staying in Ferndown, Dorset at Christmas, I noted a number of larvae of *Pieris brassicae* Linn (Large White butterfly) still feeding on cabbage in the garden. Several others were crawling up the walls of the house and garage. There were a few fresh chrysalids on the walls. — G. H. YODEN, 18 Castle Avenue, Dover, Kent.